

TECHNICAL EXHIBIT
AMENDMENT TO
APPLICATION FOR CONSTRUCTION PERMIT
WNDZ, INC.
RADIO STATION WNDZ
PORTAGE, INDIANA

April 7, 2005

750 KHZ 15 KW-D DA-D

TECHNICAL EXHIBIT
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Technical Narrative

The technical exhibit of which this narrative is part has been prepared on behalf of WNDZ, Inc., licensee of AM broadcast station WNDZ in Portage, Indiana. By means of this present application, the licensee proposes to modify the daytime directional antenna by increasing power to 15 kilowatts with a new directional antenna system. The proposal is classified as a minor change according to 47 CFR 73.3571(a)(2). As a Class D station operating on one of the channels listed in 73.25(a), the proposal satisfies 47 CFR 73.21(a)(2) which permits operation with a nominal power of not less than 0.25 kilowatt nor more than 50 kilowatts at any time. The proposal is acceptable for filing under the criteria set forth in 47 CFR 73.37.

The proposed facility will not have a significant environmental impact with regard to potential radio frequency electromagnetic field exposure to humans as defined by 47 CFR 1.1307(b). The Federal Aviation Administration has not been notified of the proposal as new tower construction is less than 200 feet and successfully passes a TOWAIR determination.

Proposed Transmitter Location

The location of the WNDZ facility will not change. The same site will continue to be used for daytime operation. A plat of the antenna site is included as Figure 1 with a transmitter site location topographical map appearing as Figure 2.

Directional Antenna System

Station WNDZ proposes to employ three towers for daytime directional operation. Existing towers number 1 and 2 have radiating elements that are 100.0 meters in height with an overall height of 101.9 meters. Tower number 3 is new with an radiating element of 59.4 meters in height with an overall height of 60.3 meters. A sketch of the antenna elements appear as Figure 3 while specifications for the daytime antenna system are included on Figure 4. The directional antenna pattern has been calculated in accordance with 47 CFR 73.150 assuming a one-ohm lumped loss resistance at the current loop of each tower in the array. The daytime standard radiation pattern is shown herein as Figure 5 and is tabulated in Figure 6.

Section 73.24(g)

The provisions of 47 CFR 73.24(g) require that the population within the 1,000 mV/m contour not exceed 1 percent of the population within the 25 mV/m groundwave contour. At the proposed location, during daytime hours,

the proposed 1,000 mV/m contour encompasses 2,515 persons or 0.5 percent of the 501,098 persons in the 25 mV/m contour. Therefore, the proposed operation of WNDZ meets the requirements of section 47 CFR 73.24(g).

Daytime Coverage

The proposed WNDZ daytime field strength contours are depicted on Figure 7. The authorized WNDZ daytime contours appear on Figure 8. As indicated on Figure 7, the proposed daytime 5 mV/m contour will encompass the entire city limits of Portage. The Portage city limits depicted were obtained from a map contained in the TIGER 2000 U.S. census files.

Daytime Allocation Study

Figure 9 shows a daytime allocation study made utilizing FCC Figure M-3 conductivities with measured conductivities at select stations. Daytime field strength contours were calculated in accordance with 47 CFR 73.183. All applicable co-channel, first, second and third adjacent channel stations included in the current CDBS are protected by the proposed operation. Figure 10 is a tabulation of the data employed in the calculation of daytime contours.

The protection requirements toward first adjacent station WJR, 760 kHz, Detroit, Michigan warrants special consideration due to existing contour overlap with the existing WNDZ facility. The following table shows the existing and proposed contour overlap areas thus reporting

a reduction in caused and received interference from the proposed WNDZ pattern.

Contour Overlap with WJR:

	0.5 mV/m (sq. km)	0.25 mV/m (sq. km)
WNDZ - License	2056	541
WNDZ - Proposed	1898	349

Based on this analysis, the proposed WNDZ facility complies with all relevant allocation criteria.

Field Strength Measurements

In order to establish the actual ground conductivity in the area, field strength measurements were taken on WNDZ and WRPQ. Measurement data are contained in Figure 11 both in graphical and tabular form.

Field strength measurements were taken by Mr. Timothy Crain and Mr. Matthew Folkert. Recently calibrated field intensity meters were employed.

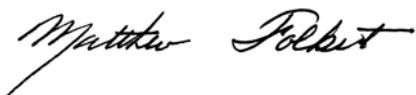
Critical Hours Study

During critical hours, WNDZ adequately protects the 0.1 mV/m groundwave contour of co-channel Class A station WSB, Atlanta, Georgia. From the WNDZ site, the closest point on the KSL 0.1 mV/m contour is 652 kilometers on a true bearing of 165 degrees. The permissible field toward this KSL point, as determined by

47 CFR 73.187, is 1456 mV/m at one kilometer. The proposed WMLB directional antenna pattern in the vicinity of 165 degrees true has radiation values of less than 300 mV/m; therefore, WSB is protected during critical hours by the WNDZ proposal.

Environmental Considerations

The proposed WNDZ operation was evaluated in terms of both the electric and magnetic field components which will be present at the base of each tower. Using Figures 1 through 4 of Supplement A to OET Bulletin 65, the worst case interpolated distance at which the electric and magnetic fields would fall below ANSI guidelines is 2 meters. At most locations, a fence prevents access to the towers to a distance of more than 2 meters. At places where the fence is less than 2 meters, measurements will be taken after implementation of the new pattern to ensure compliance; however, the proposed operation is predicted to be within the standards specified in 47 CFR 1.1307(b) for human exposure to radiofrequency radiation.

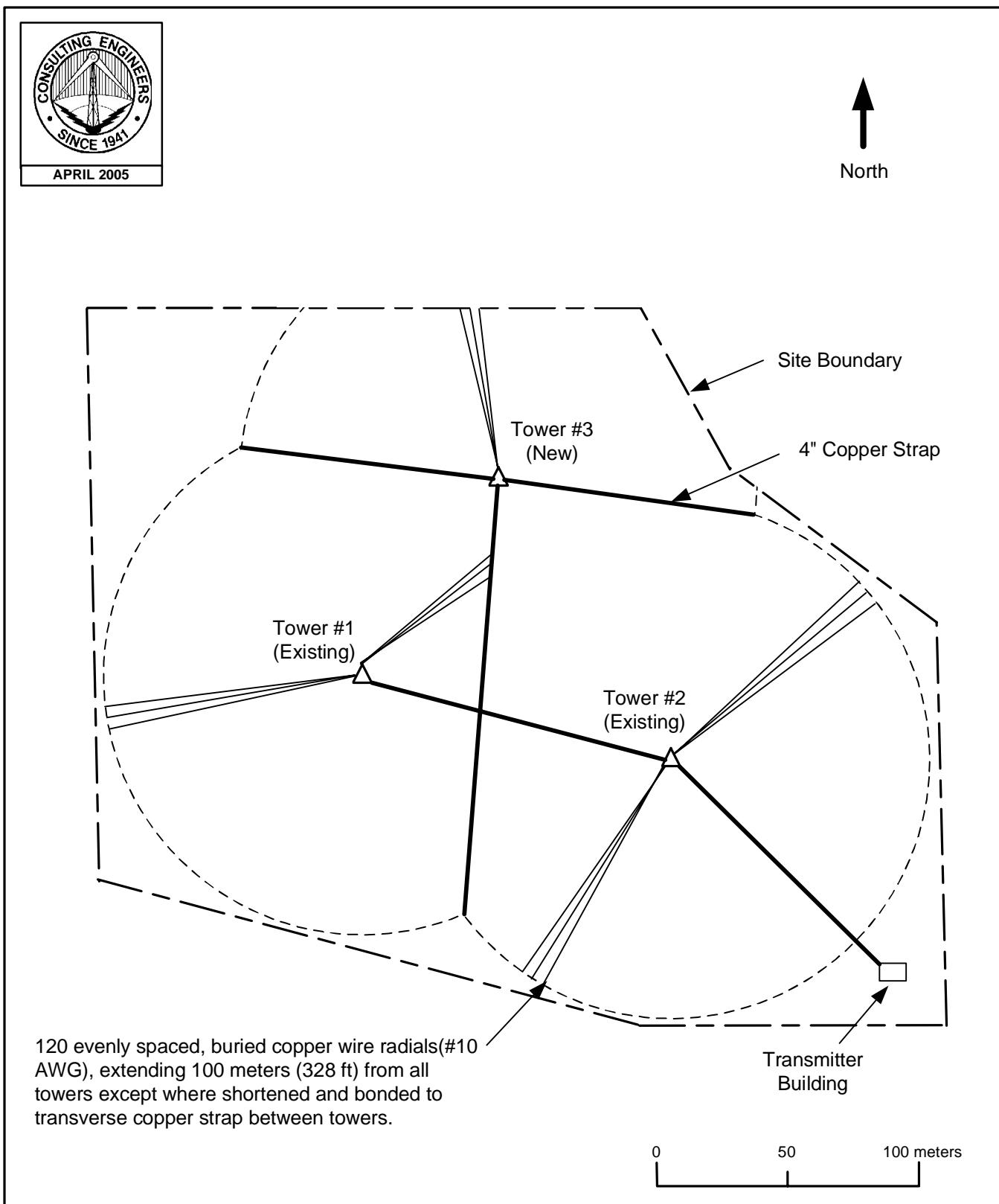


Matthew Folkert
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April 7, 2005

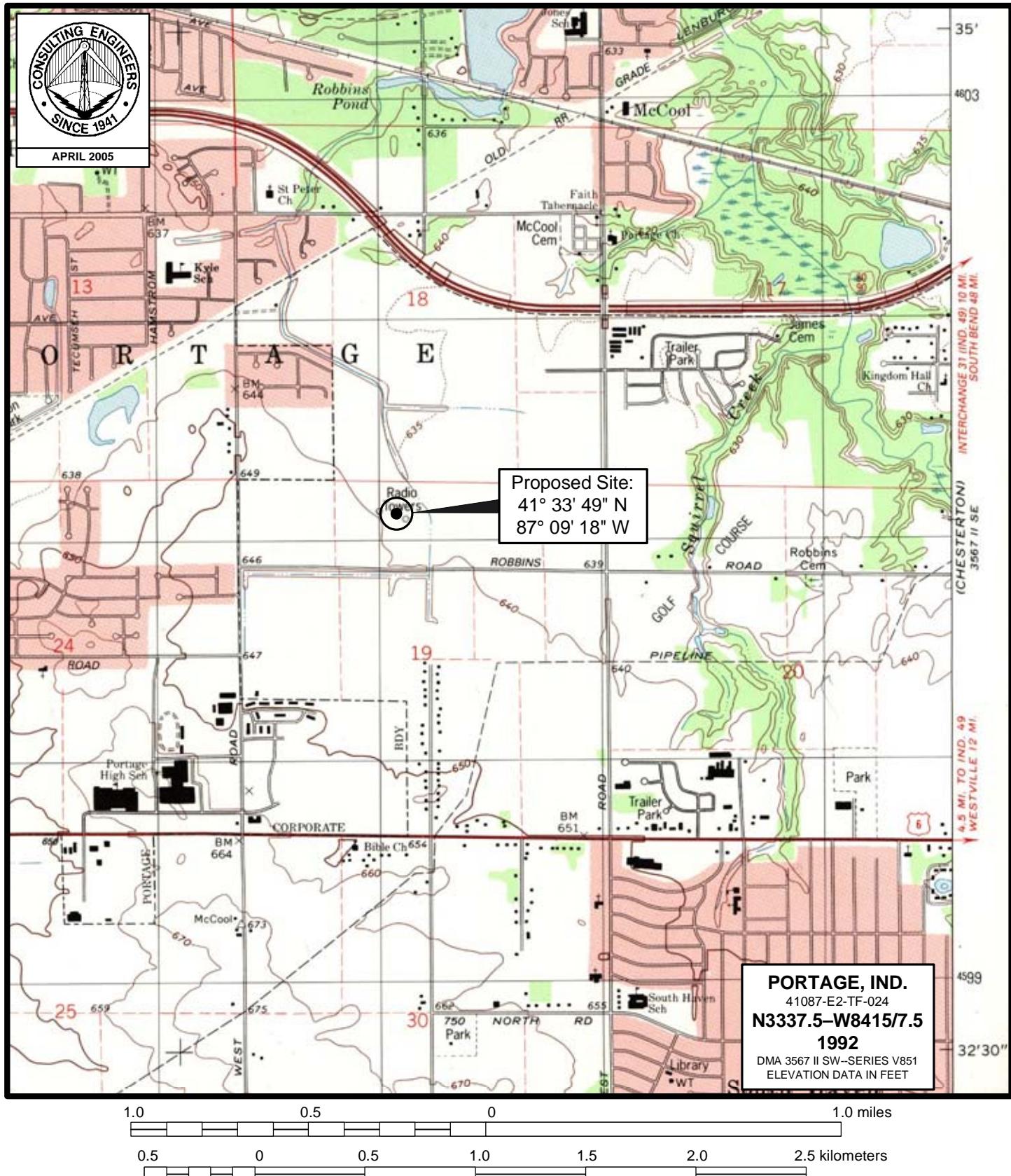
Figure 1A



ANTENNA SITE PLAT

RADIO STATION WNDZ
PORTAGE, INDIANA
750 KHZ 15 KW-D DA-D

Figure 2A



PROPOSED TRANSMITTER LOCATION

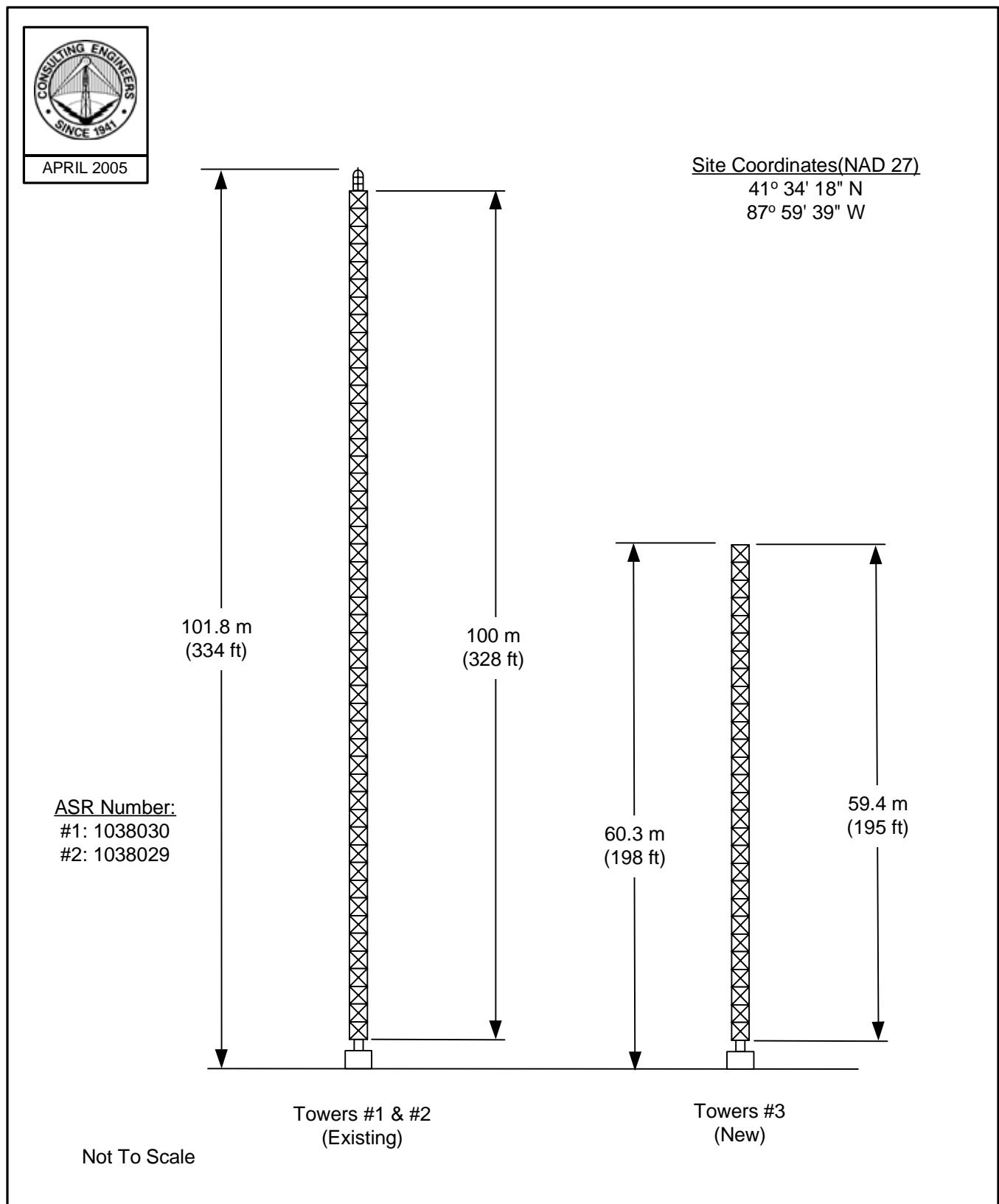
RADIO STATION WNDZ

PORTAGE, INDIANA

750 KHz 15 KW-D DA-D

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Figure 3A



SKETCH OF ANTENNA ELEMENTS

RADIO STATION WNDZ
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Specifications for Daytime
Directional Antenna System

Frequency: 750 kHz
Hours of Operation: Daytime
Power: 15 kW
Number of Towers: 3
Type of Tower: Guyed, Uniform Cross-section,
base-insulated
Tall Towers - height above
base insulator 100.0 m (328 ft)
Tall Towers - overall height 101.9 m (334 ft)
Short Tower - height above
base insulator 59.4 m (195 ft)
Short Tower - overall height 60.3 m (198 ft)
Daytime Tower Arrangement:

Tower No.	Spacing (deg.)/(m)	Orientation (deg. True)
1	0.0	0.0
2	110.0/122.2	105.0
3	85.0/94.4	35.0

Daytime Element Field Parameters:

Tower No.	Field Ratio	Phase (degrees)
1	1.000	0.0
2	1.862	+81.4
3	1.024	-21.0

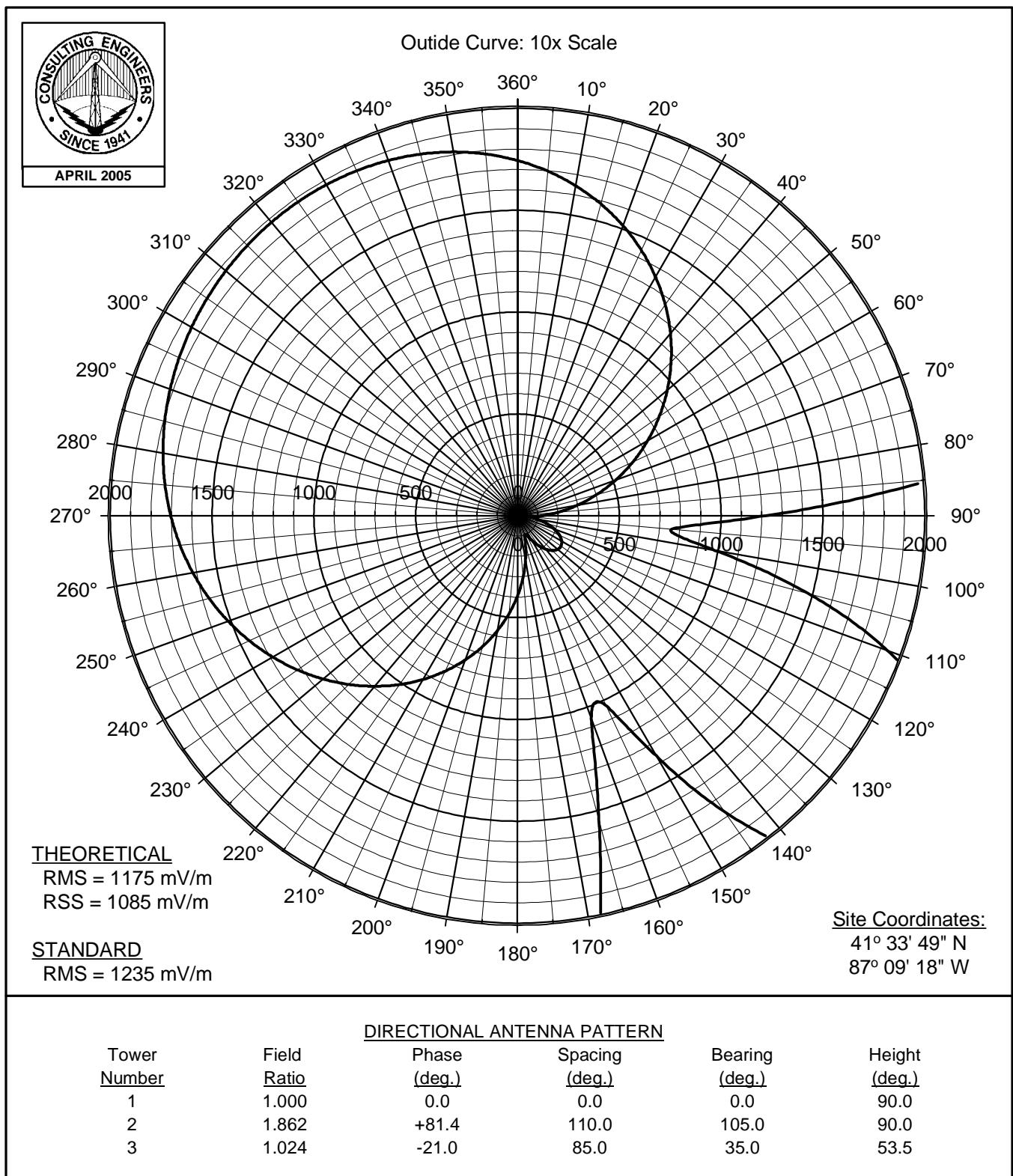
Ground System:

Installed about the base of each tower are 120 evenly spaced, buried copper wire radials (#10 AWG), extending 100.0 meters (328 ft) from all towers except where shortened and bonded to transverse copper strap between towers. In addition, copper strap runs from the transmitter and down the line of towers and is bonded to ground at the base of each tower.

Geographic Coordinates of
Center of Antenna Array:

41° 33' 49" North Latitude
87° 09' 18" West Longitude

Figure 5A



PROPOSED DAYTIME HORIZONTAL PLANE STANDARD RADIATION PATTERN

RADIO STATION WNDZ
PORTAGE, INDIANA
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Figure 6A

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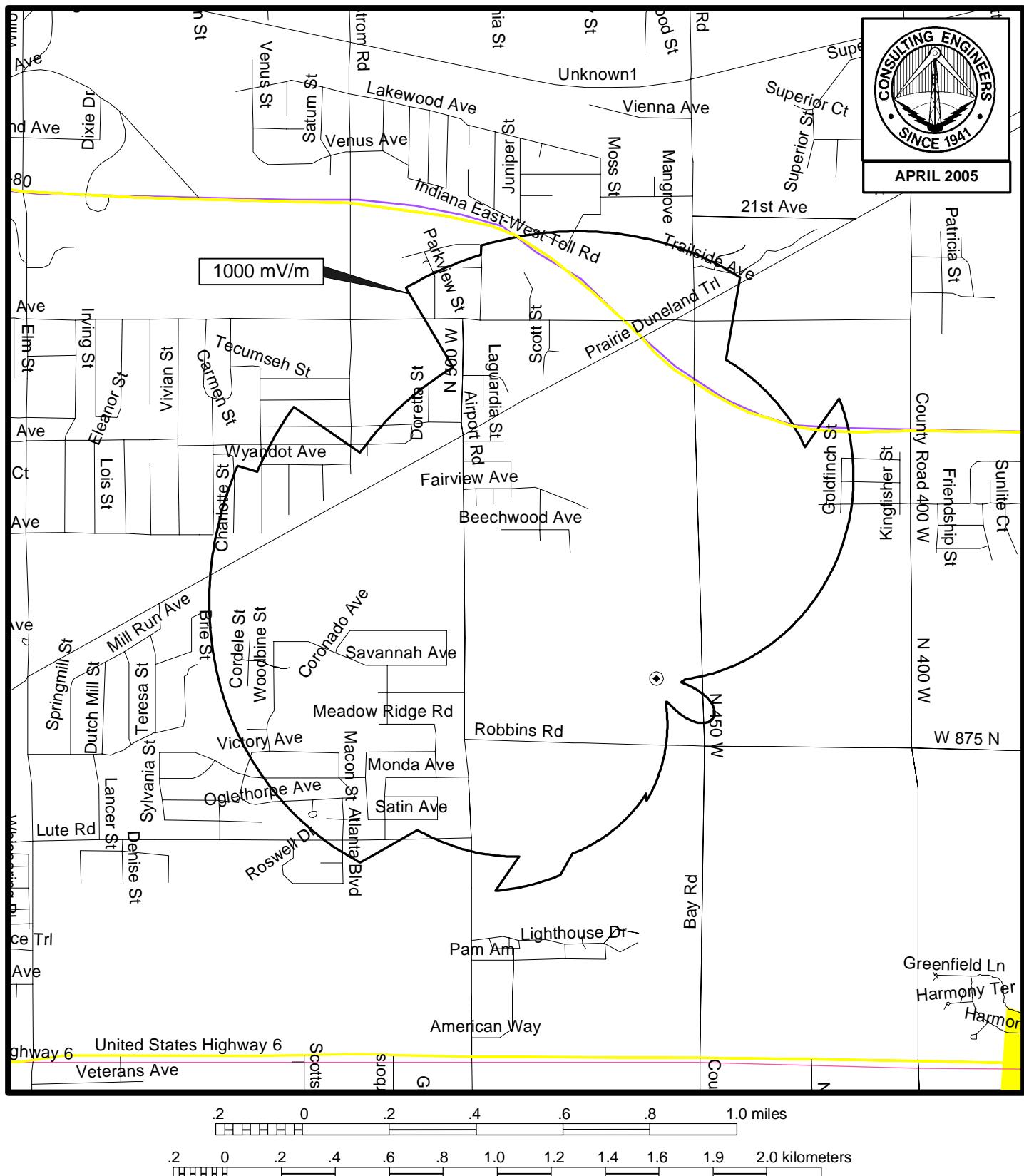
750 KHZ 15 KW-D DA-D

DAYTIME RADIATION PATTERN
(Radiation Values at One Kilometer)

Tower <u>Number</u>	Field <u>Ratio</u>	Phase <u>(deg.)</u>	Spacing <u>(deg.)</u>	Bearing <u>(deg.)</u>	Height <u>(deg.)</u>
1	1.000	0.0	0.0	0.0	90.0
2	1.862	+81.4	110.0	105.0	90.0
3	1.024	-21.0	85.0	35.0	53.5
Input Power <u>(kW)</u>	Loop Loss <u>(ohms)</u>	Theo. RMS <u>(mV/m)</u>	Theo. RSS <u>(mV/m)</u>	Q Factor <u>(mV/m)</u>	Standard RMS <u>(mV/m)</u>
15	1.0	1175	1085	38.7	1235
Azimuth <u>(mV/m)</u>	Field <u>(mV/m)</u>	Azimuth <u>(mV/m)</u>	Field <u>(mV/m)</u>	Azimuth <u>(mV/m)</u>	Field <u>(mV/m)</u>
0	1744	90	122	180	395
5	1698	95	76	185	485
10	1645	100	99	190	575
15	1584	105	148	195	666
20	1515	110	193	200	755
25	1439	115	228	205	843
30	1355	120	251	210	928
35	1265	125	261	215	1012
40	1168	130	257	220	1093
45	1067	135	241	225	1171
50	960	140	214	230	1247
55	851	145	177	235	1319
60	739	150	136	240	1387
65	626	155	103	245	1452
70	514	160	106	250	1512
75	405	165	154	255	1567
80	301	170	226	260	1617
85	204	175	308	265	1662
					355
					1782

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Figure 7A
Sheet 1 of 2

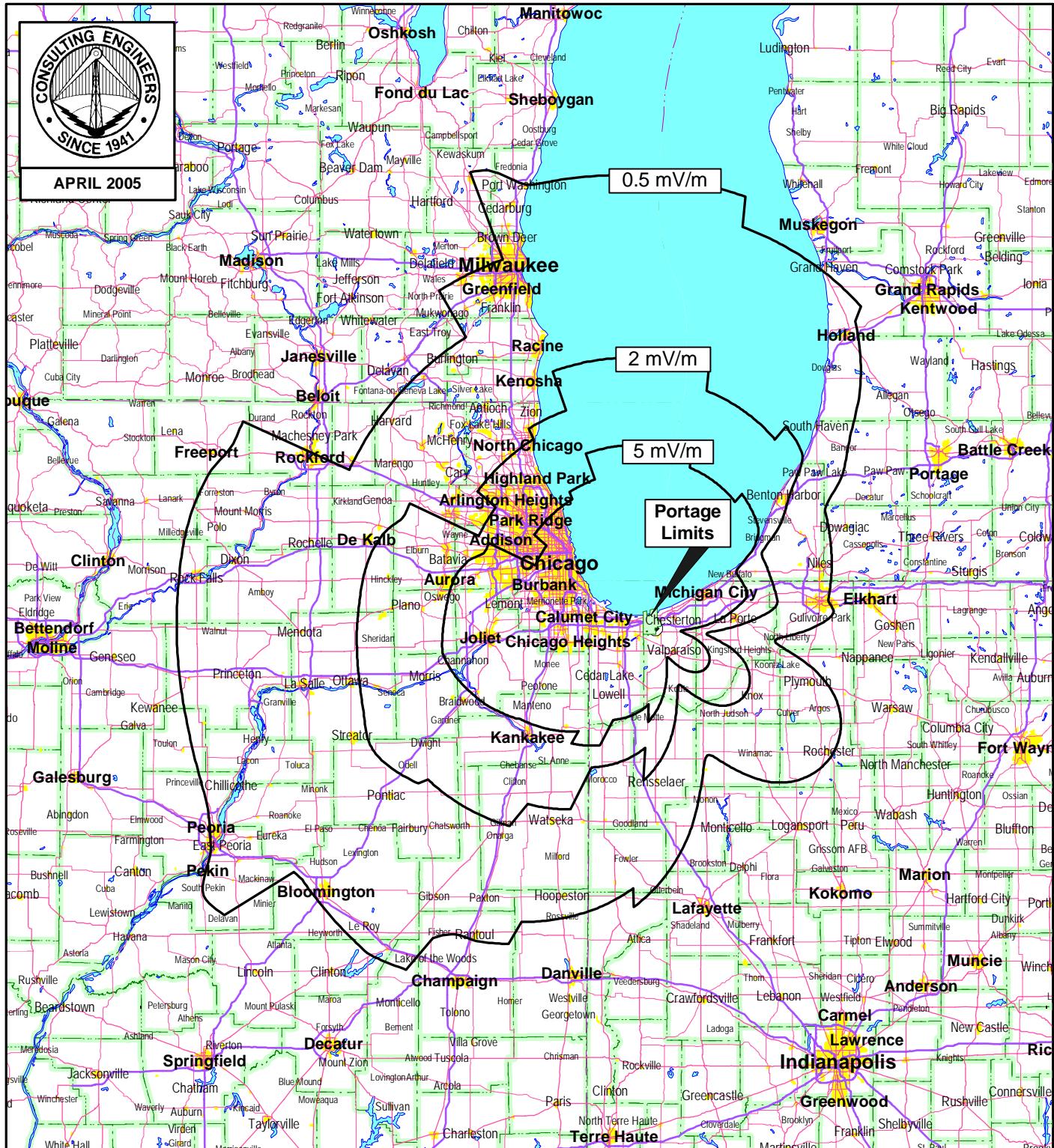


PROPOSED DAYTIME FIELD STRENGTH COVERAGE CONTOUR

RADIO STATION WNDZ
PORTAGE, INDIANA
750 KHZ 15 KW-D DA-D

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Figure 7A
Sheet 2 of 2



50 0 50 100 150 200 miles

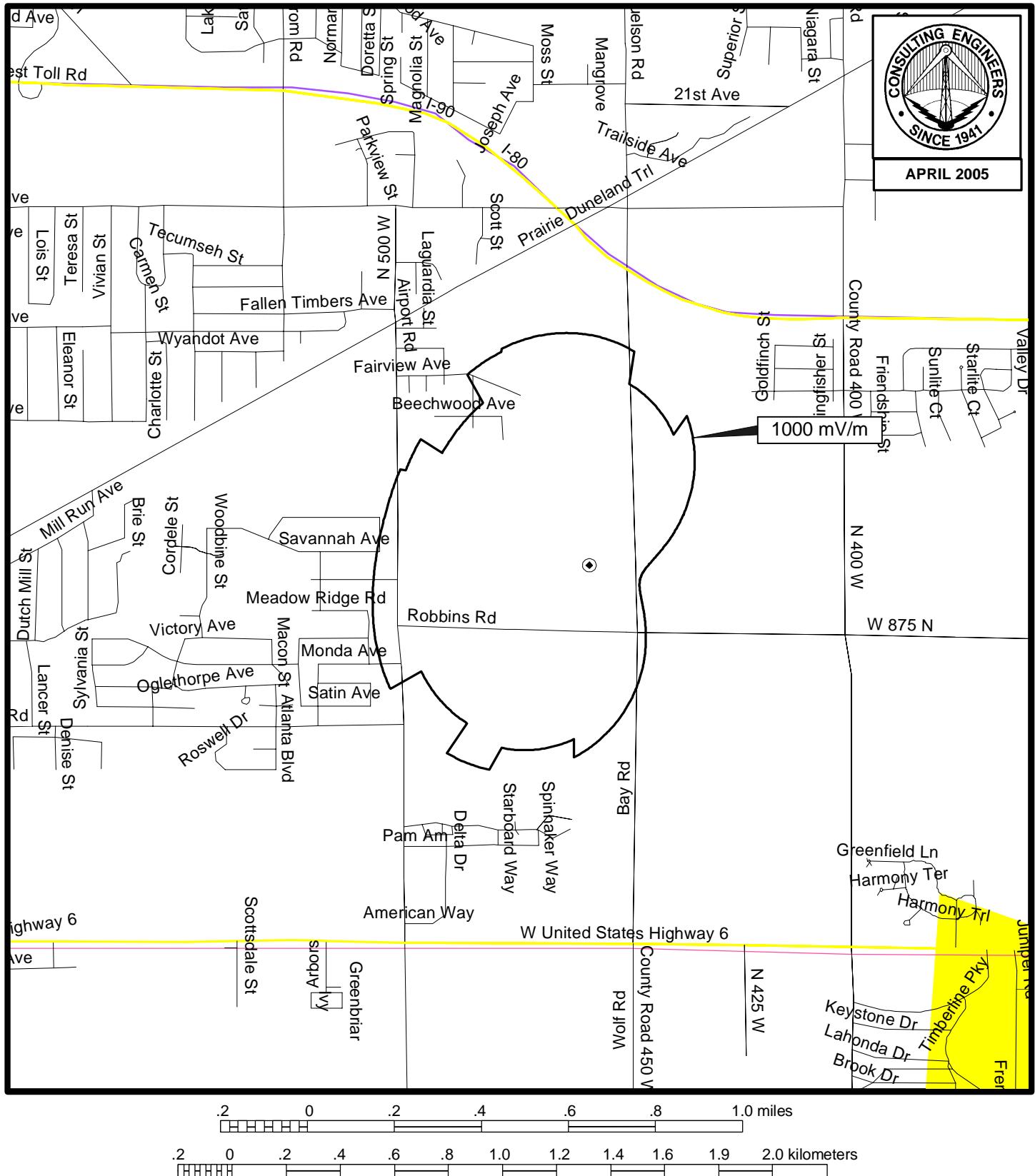
50 0 50 100 150 200 250 kilometers

PROPOSED DAYTIME COVERAGE CONTOURS

RADIO STATION WNDZ
PORTAGE, INDIANA
750 KHZ 15 KW-D DA-D

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Figure 8A
Sheet 1 of 2

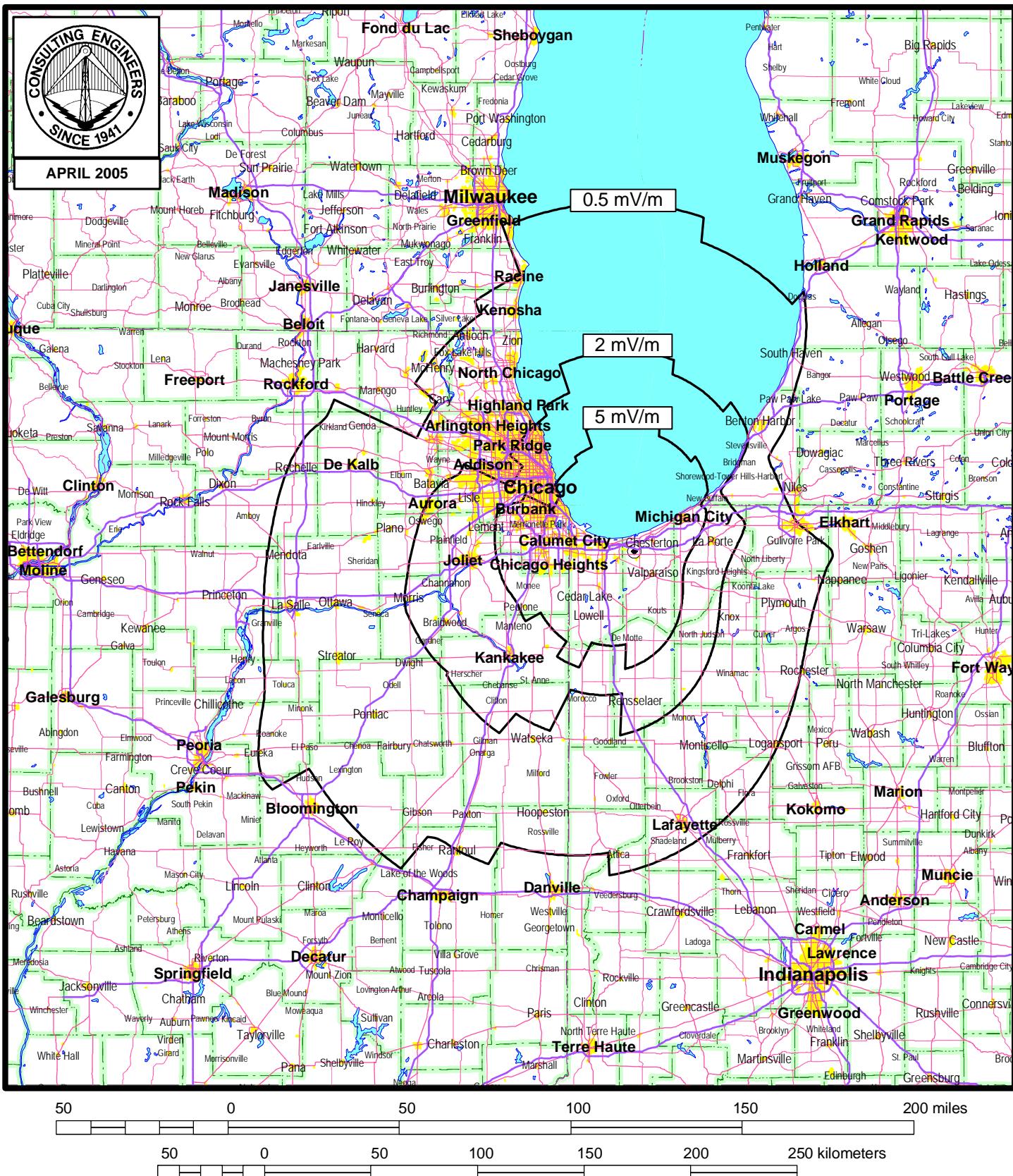


EXISTING DAYTIME FIELD STRENGTH COVERAGE CONTOUR

RADIO STATION WNDZ
PORTAGE, INDIANA
750 KHZ 15 KW-D DA-D

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Figure 8A
Sheet 2 of 2

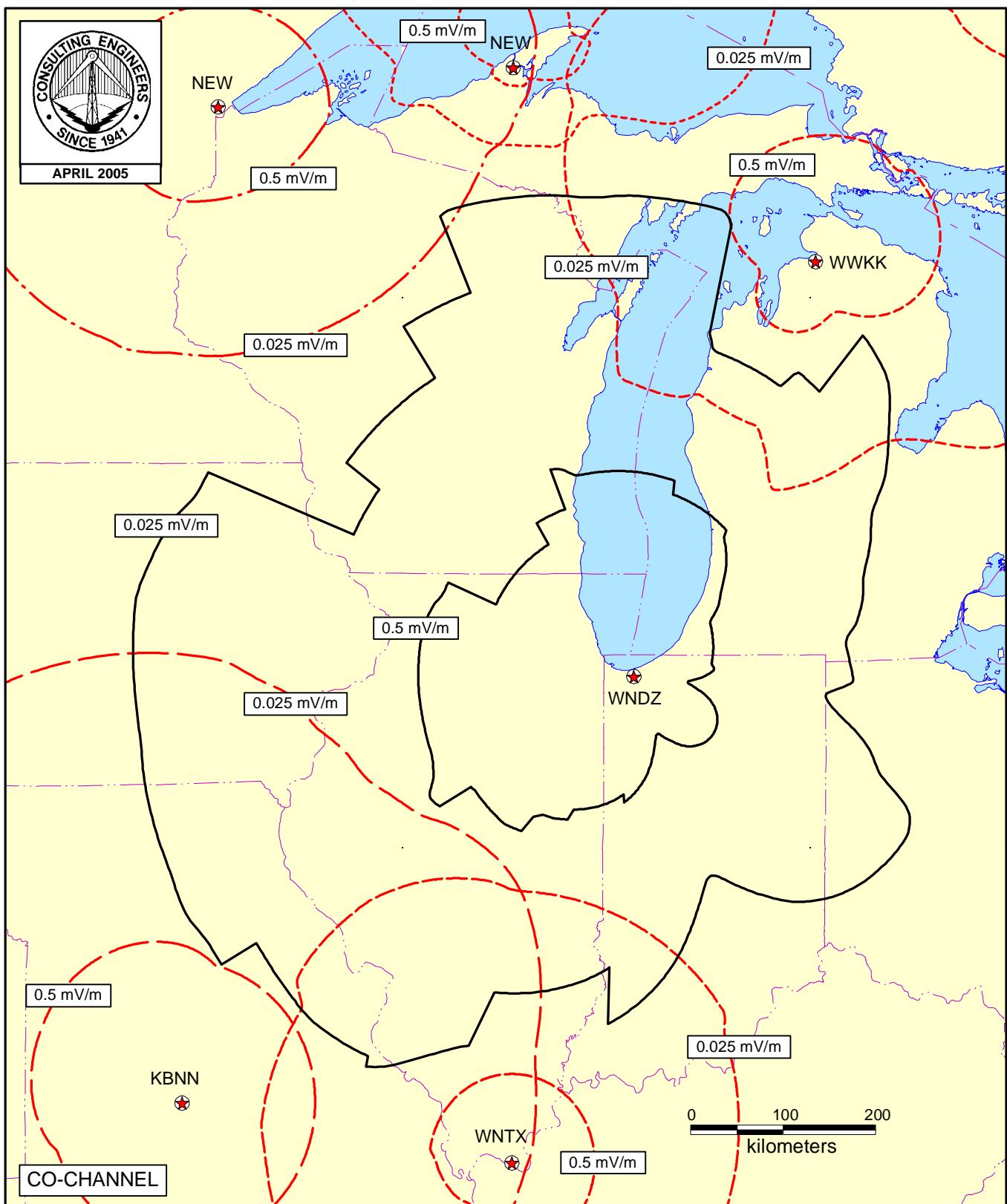


EXISTING DAYTIME FIELD STRENGTH COVERAGES

RADIO STATION WNDZ
PORTAGE, INDIANA

750 KHZ 15 KW-D DA-D

Figure 9A
Sheet 1 of 3

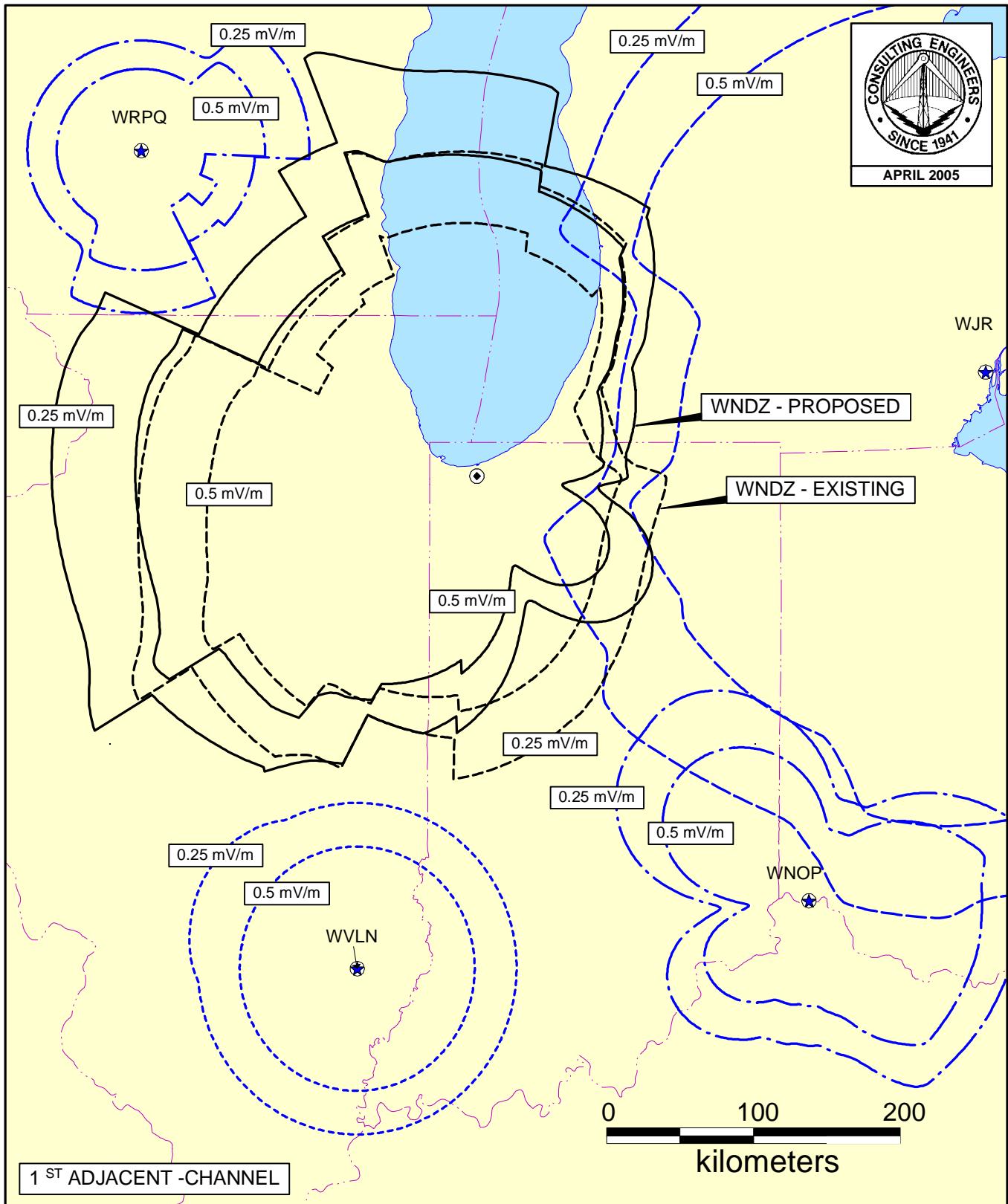


DAYTIME ALLOCATION STUDY

RADIO STATION WNDZ
PORTAGE, INDIANA
750 KHZ 15 KW-D DA-D

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Figure 9A
Sheet 2 of 3

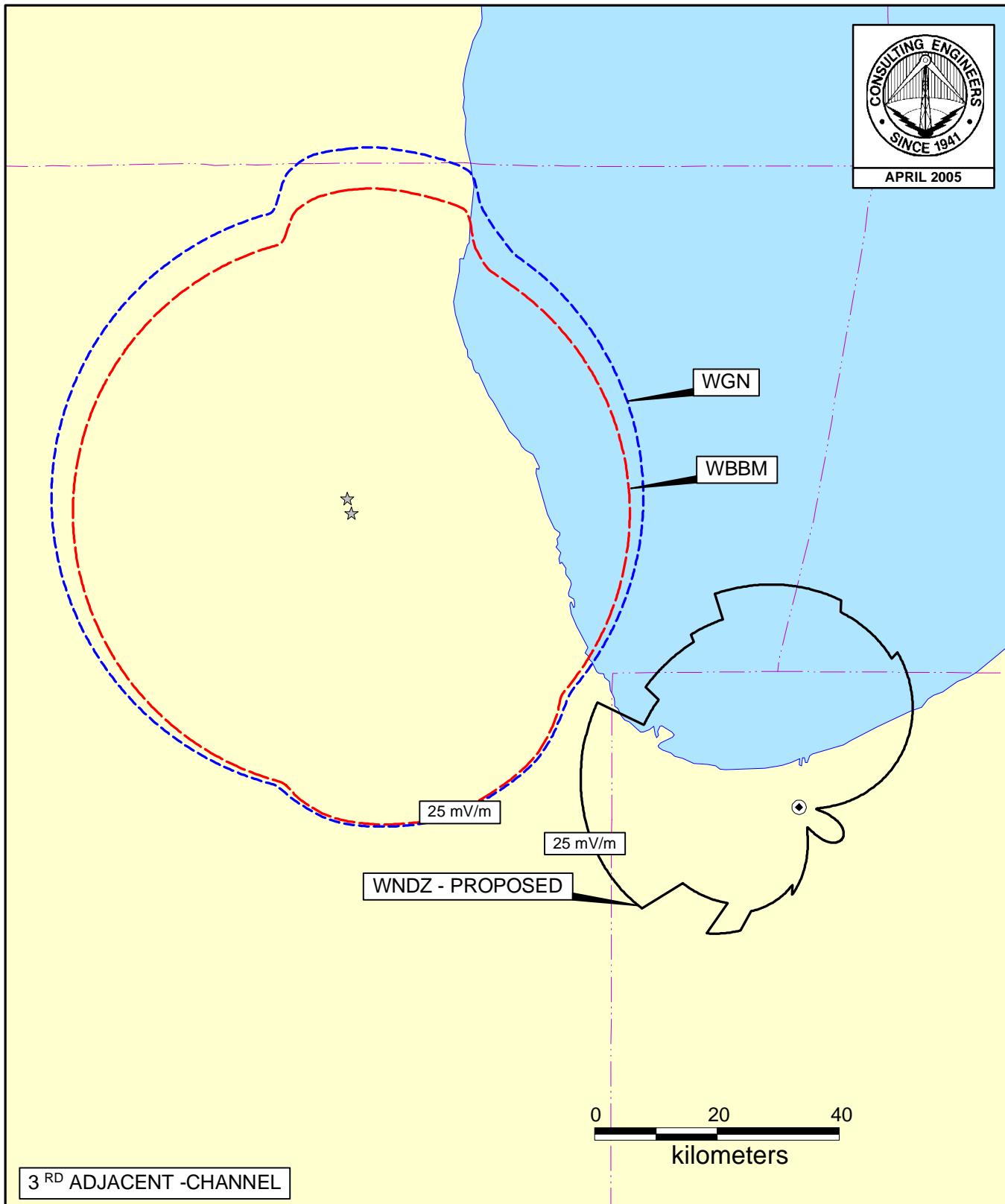


DAYTIME ALLOCATION STUDY

RADIO STATION WNDZ
PORTAGE, INDIANA
750 KHZ 15 KW-D DA-D

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Figure 9A
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DAYTIME ALLOCATION STUDY

RADIO STATION WNDZ
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Tabulation of Data Employed in
Calculation of Groundwave Contours

Reference Station: WNDZ, 750 kHz
Location: 41-33-49 N, 087-09-18 W

720 kHz

88.5 km WGN L 42-00-42 N 088-02-07 W 50.0 kW ND1 - 404.0 mV/m@1km
55.0 mi Azi: 303.9 Class: A Sched: U File #: BL
Location: CHICAGO, IL, US

740 kHz

299.6 km WRPQ L 43-27-19 N 089-45-13 W 0.25 kW ND1 - 294.5 mV/m@1km
186.2 mi Azi: 313.6 Class: D Sched: U File #: BL
Location: BARABOO, WI, US

327.6 km WVLN L 38-42-01 N 088-04-53 W 0.25 kW ND2 - 307.4 mV/m@1km
203.5 mi Azi: 193.7 Class: D Sched: U File #: BML20020411ABA
Location: OLNEY, IL, US

350.6 km WNOP C 39-05-41 N 084-34-59 W 2.5 kW DA2 - 461.5 mV/m@1km
217.8 mi Azi: 142.3 Class: D Sched: U File #: BP20040107AAQ
Location: NEWPORT, KY, US

750 kHz

0.0 km WNDZ A 41-33-49 N 087-09-18 W 5.0 kW DAD - 674.3 mV/m@1km
0.0 mi Azi: 180.0 Class: D Sched: D File #: BMJP20040127AGF
Location: CALUMET CITY, IL, US

456.1 km WWKK L 45-20-05 N 084-55-34 W 1.0 kW DA2 - 292.6 mV/m@1km
283.4 mi Azi: 24.1 Class: B Sched: U File #: BL20000605ANA
Location: PETOSKEY, MI, US

507.5 km WNTX L 37-08-31 N 088-38-58 W 0.5 kW NDD - 289.0 mV/m@1km
315.3 mi Azi: 194.2 Class: D Sched: D File #: BL19871020AA
Location: BROOKPORT, IL, US

626.1 km NEW A 47-05-50 N 088-38-00 W 0.25 kW DA3 - 141.2 mV/m@1km
389.0 mi Azi: 348.6 Class: B Sched: U File #: BNP20000201AFQ
Location: HOUGHTON, MI, US

750 kHz (Cont.)

641.2 km KBNN L 37-41-10 N 092-41-39 W 5.0 kW NDD - 286.5 mV/m@1km
398.4 mi Azi: 226.1 Class: D Sched: D File #: BL19880314AJ
Location: LEBANON, MO, US

704.9 km NEW A 46-44-28 N 092-15-11 W 1.0 kW DAN - 286.3 mV/m@1km
438.0 mi Azi: 322.9 Class: B Sched: U File #: BNP20040130BFA
Location: DULUTH, MN, US

760 kHz

333.9 km WJR L 42-10-05 N 083-12-54 W 50.0 kW ND1 - 402.3 mV/m@1km
207.5 mi Azi: 79.7 Class: A Sched: U File #: BL19970212AC
Location: DETROIT, MI, US

780 kHz

86.7 km WBBM L 41-59-26 N 088-01-39 W 50.0 kW ND1 - 402.3 mV/m@1km
53.9 mi Azi: 302.9 Class: A Sched: U File #: BL20000208ABZ
Location: CHICAGO, IL, US

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Field Strength Measurement Data

Figure 11
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Radio Station: WNDZ

22 Degree Radial - Day

Point Desig.	Distance (km)	Date	Time (local)	Field Strength (mV/m)
1	0.47	11/5/2004	941	1430
2	1.45	11/5/2004	936	400
3	2.46	11/5/2004	932	195
4	3.69	11/5/2004	924	128
5	4.14	11/5/2004	921	118
6	5.25	11/5/2004	914	82.0
7	5.89	11/5/2004	909	75.0
8	6.63	11/5/2004	903	98.0
9	6.97	11/5/2004	857	72.0
10	189.9	11/2/2004	951	0.330
11	193.1	11/2/2004	917	0.280
12	194.7	11/2/2004	931	0.450
13	196.3	11/2/2004	940	0.280
14	199.6	11/2/2004	1014	0.240
15	206.0	11/2/2004	1025	0.182
16	214.0	11/2/2004	1036	0.100
17	218.9	11/2/2004	1051	0.115
18	228.5	11/2/2004	1110	0.064
19	239.8	11/2/2004	1124	0.045
20	241.4	11/2/2004	1145	0.055

Figure 11
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KILOMETERS FROM ANTENNA

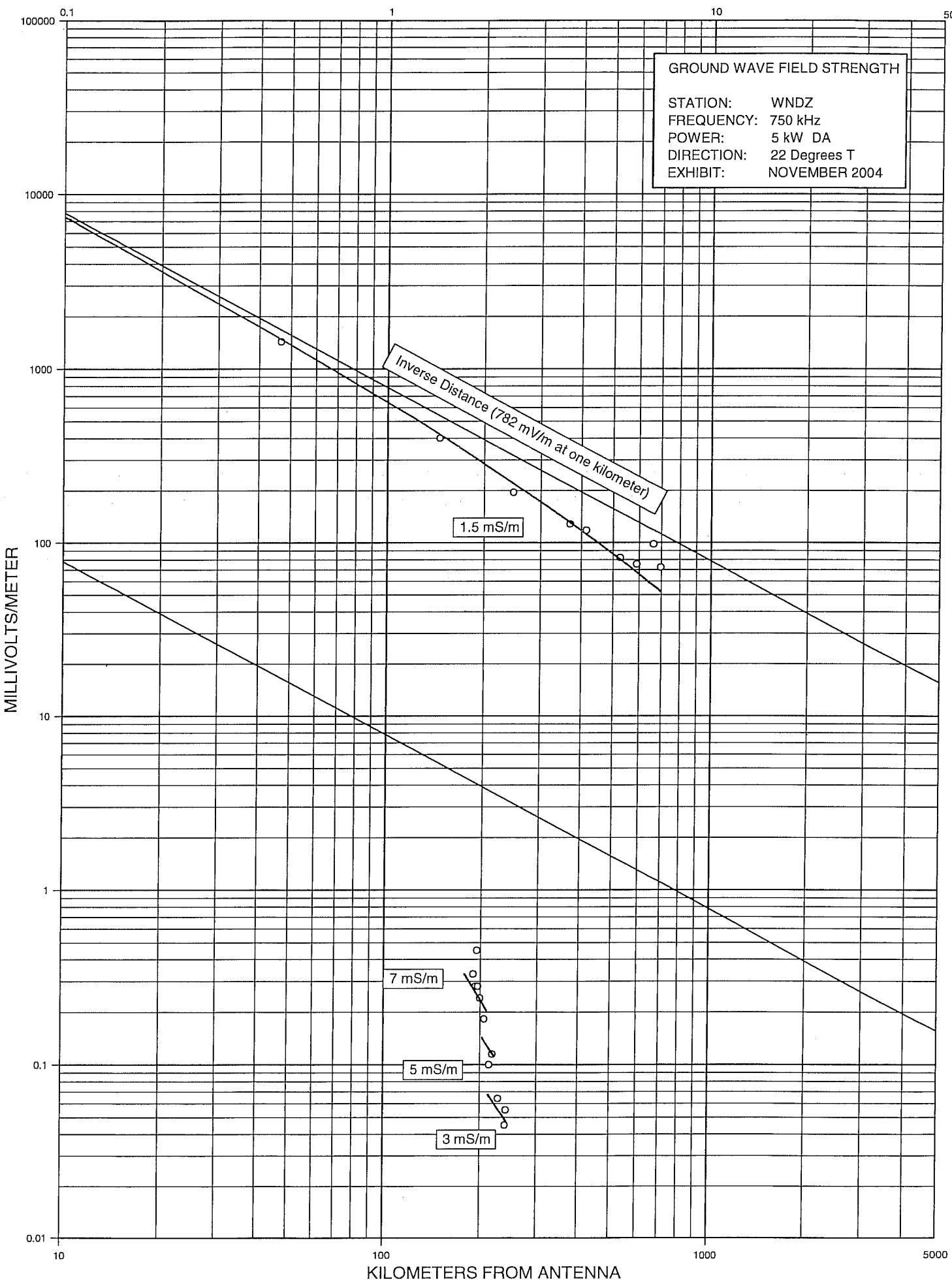


Figure 11
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Radio Station: WNDZ

195 Degree Radial - Day

Point Design.	Distance (km)	Date	Time (local)	Field Strength (mV/m)
1	1.74	9/3/2004	1055	400
2	1.90	9/3/2004	1056	360
3	2.05	9/3/2004	1058	325
4	2.19	9/3/2004	1059	295
5	2.33	9/3/2004	1101	260
6	2.48	9/3/2004	1102	223
7	2.64	9/3/2004	1104	184
8	3.16	9/3/2004	1106	165
9	4.83	9/3/2004	1108	110
10	5.63	9/3/2004	1110	94.0
11	7.34	9/3/2004	1114	82.0
12	9.87	9/3/2004	1117	60.0
13	10.80	9/3/2004	1119	52.0
14	13.20	9/3/2004	1123	33.5
15	16.50	9/3/2004	1129	27.2
16	19.40	9/3/2004	1133	21.5
17	22.40	9/3/2004	1137	15.8
18	25.60	9/3/2004	1144	13.6
19	28.20	9/3/2004	1149	12.0
20	31.50	9/3/2004	1155	10.2
21	34.90	9/3/2004	1159	8.40
22	39.00	9/3/2004	1203	6.10
23	45.60	9/3/2004	1211	5.00
24	51.50	9/3/2004	1219	4.20
25	56.60	9/3/2004	1226	3.15
26	59.90	9/3/2004	1232	2.62
27	65.00	8/28/2004	1745	1.78
28	70.30	8/28/2004	1738	1.19
29	76.90	8/28/2004	1728	1.60
30	80.20	8/28/2004	1722	1.09
31	85.20	8/28/2004	1715	1.40
32	90.90	8/28/2004	1707	1.38
33	95.20	8/28/2004	1700	1.21
34	100.2	8/28/2004	1652	1.13
35	105.3	8/28/2004	1644	1.00
36	116.0	8/28/2004	1623	0.980
37	126.7	8/28/2004	1607	0.860
38	133.1	8/28/2004	1559	0.590
39	140.1	8/28/2004	1549	0.640
40	148.7	8/28/2004	1537	0.580
41	156.3	8/28/2004	1526	0.385
42	168.9	8/28/2004	1504	0.192
43	176.5	8/28/2004	1454	0.189
44	186.8	8/28/2004	1444	0.175
45	196.8	8/28/2004	1429	0.144
46	207.7	8/28/2004	1415	0.165
47	218.7	8/28/2004	1402	0.121
48	228.9	8/28/2004	1349	0.110
49	238.2	8/28/2004	1336	0.094
50	246.5	8/28/2004	1322	0.080
51	256.7	8/28/2004	1308	0.058
52	271.1	8/28/2004	1159	0.045

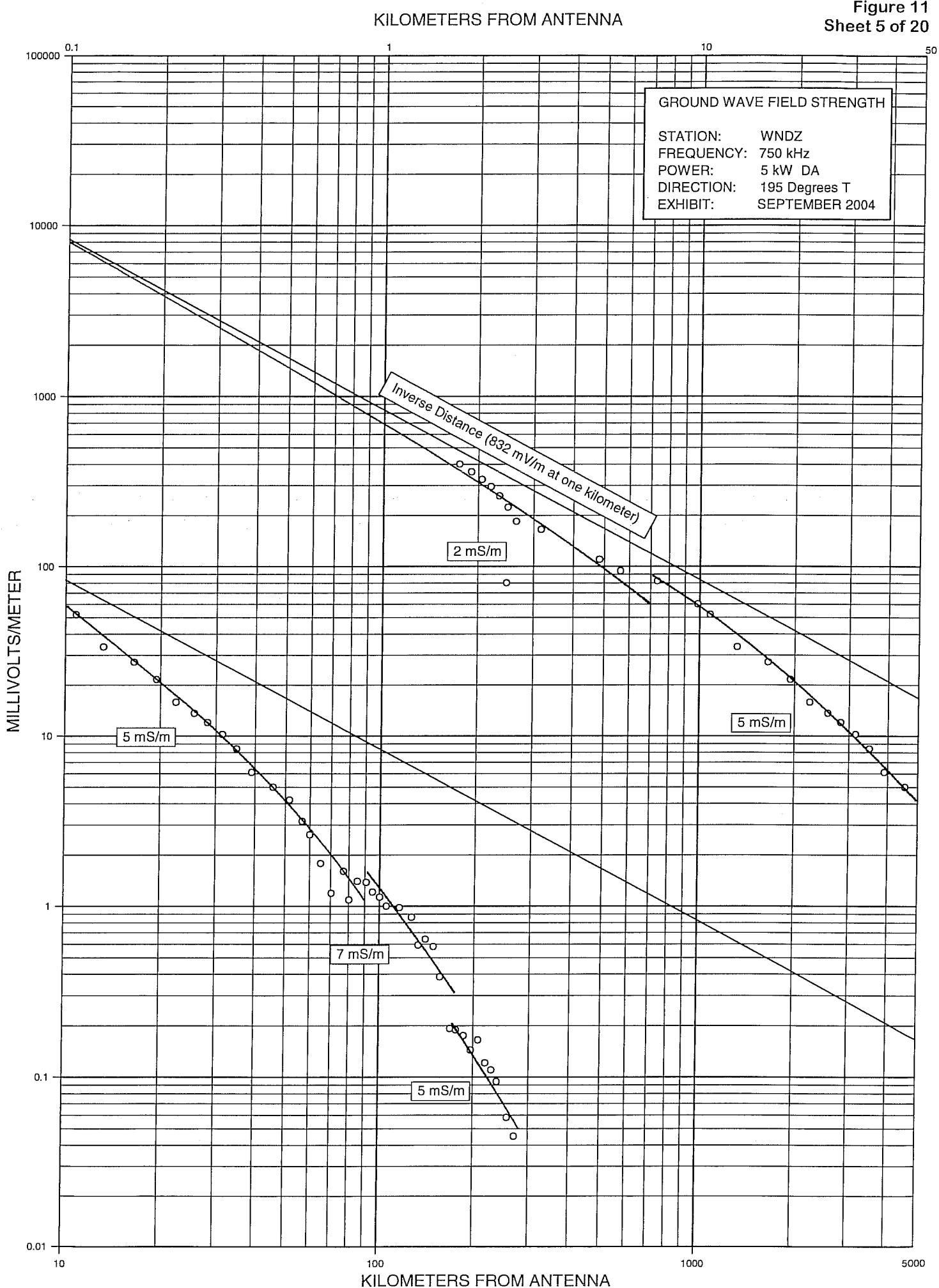


Figure 11
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Radio Station: WNDZ

227 Degree Radial - Day

Point Desig.	Distance (km)	Date	Time (local)	Field Strength (mV/m)
1	1.80	9/3/2004	949	326
2	1.92	9/3/2004	948	324
3	2.06	9/3/2004	946	297
4	2.28	9/3/2004	944	270
5	2.36	9/3/2004	942	263
6	2.44	9/3/2004	941	256
7	2.69	9/3/2004	938	218
8	2.95	9/3/2004	937	200
9	3.09	9/3/2004	936	189
10	4.48	9/3/2004	933	151
11	5.28	9/3/2004	931	128
12	7.49	9/3/2004	927	68.0
13	9.22	9/3/2004	922	59.0
14	11.80	9/3/2004	918	46.0
15	14.00	9/3/2004	914	34.5
16	16.10	9/3/2004	910	23.9
17	18.30	9/3/2004	906	22.3
18	21.10	9/3/2004	859	20.5
19	25.00	9/3/2004	848	15.4
20	27.10	9/3/2004	844	12.6
21	30.40	9/3/2004	839	8.40
22	35.70	9/3/2004	828	10.0
23	41.00	9/3/2004	820	8.50
24	47.20	9/3/2004	811	7.20
25	50.60	9/3/2004	806	4.30
26	55.50	9/3/2004	759	4.10
27	60.30	9/3/2004	753	3.80
28	64.80	9/3/2004	746	3.65
29	70.30	9/3/2004	738	3.90
30	75.30	9/3/2004	731	4.10
31	80.80	9/3/2004	719	3.35
32	86.20	9/2/2004	1810	3.30
33	90.60	9/2/2004	1805	3.18
34	96.20	9/2/2004	1755	2.93
35	101.4	9/2/2004	1749	2.75
36	108.2	9/2/2004	1741	2.48
37	116.3	9/2/2004	1732	2.21
38	125.1	9/2/2004	1723	1.86
39	133.7	9/2/2004	1714	1.53
40	140.3	9/2/2004	1703	1.26
41	148.5	9/2/2004	1652	0.980
42	157.9	9/2/2004	1642	0.750
43	167.2	9/2/2004	1631	0.630
44	177.5	9/2/2004	1620	0.580
45	186.4	9/2/2004	1609	0.520
46	197.4	9/2/2004	1555	0.342
47	206.8	9/2/2004	1544	0.320
48	217.7	9/2/2004	1529	0.290
49	226.2	9/2/2004	1518	0.272
50	236.5	9/2/2004	1506	0.245
51	247.8	9/2/2004	1452	0.194
52	258.0	9/2/2004	1439	0.172
53	267.0	9/2/2004	1430	0.145
54	276.5	9/2/2004	1418	0.125

KILOMETERS FROM ANTENNA

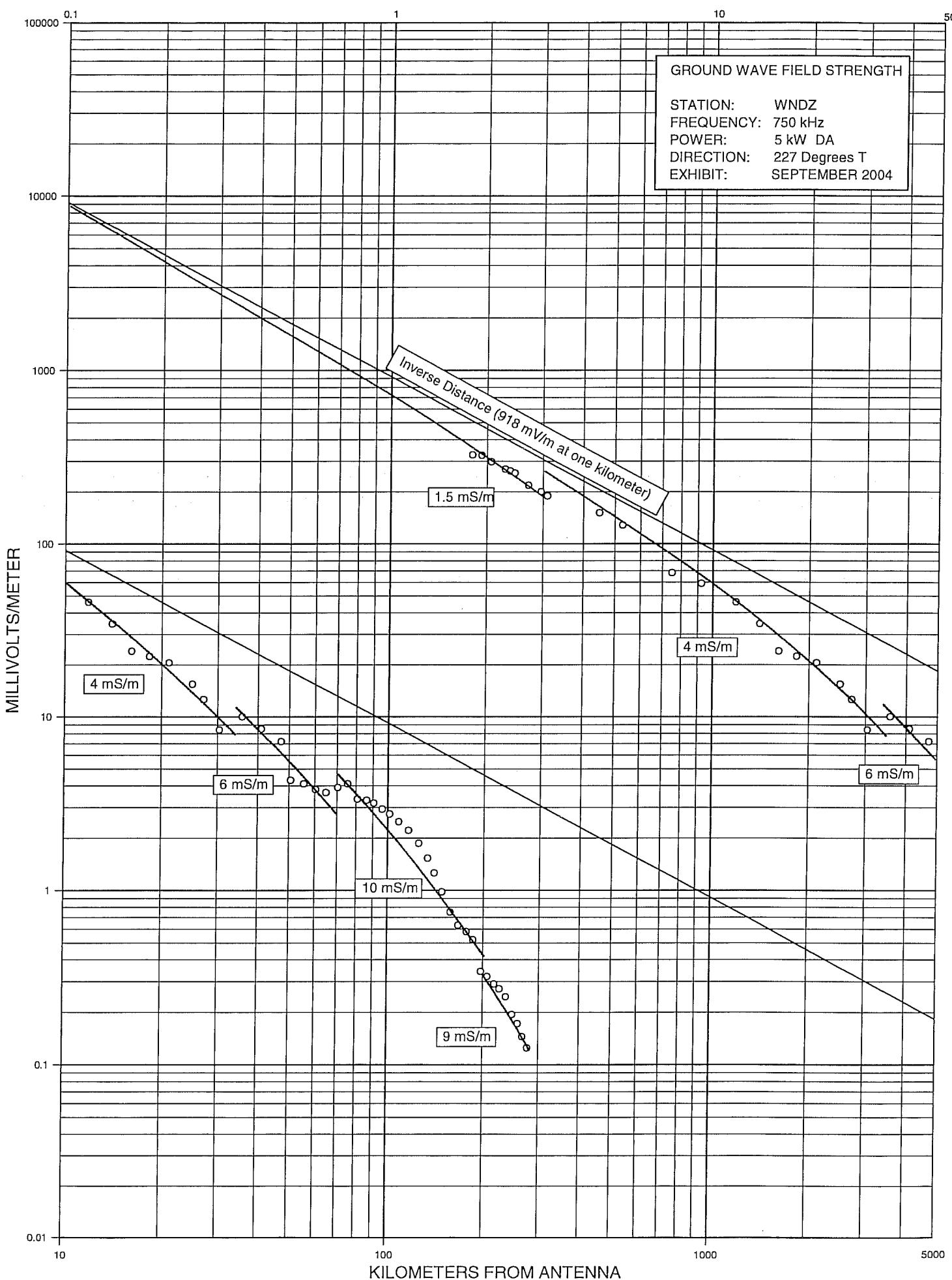


Figure 11
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Radio Station: WNDZ

308 Degree Radial(Stub) - Day

Point Desig.	Distance (km)	Date	Time (local)	Field Strength (mV/m)
1	133.3	9/2/2004	943	0.500
2	141.6	9/2/2004	934	0.255
3	148.7	9/2/2004	927	0.248
4	158.8	9/2/2004	913	0.202
5	167.8	9/2/2004	859	0.201
6	178.1	9/2/2004	845	0.178
7	186.1	9/2/2004	830	0.142
8	197.5	9/1/2004	915	0.080
9	208.8	9/1/2004	932	0.090
10	219.4	9/1/2004	946	0.091
11	227.4	9/1/2004	1001	0.088
12	237.7	9/1/2004	1019	0.052
13	246.5	9/1/2004	1036	0.056
14	257.1	9/1/2004	1051	0.035
15	266.7	9/1/2004	1104	0.040
16	278.7	9/1/2004	1126	0.024
17	286.1	9/1/2004	1137	0.014
18	298.6	9/1/2004	1203	0.015
19	312.1	9/1/2004	1227	0.011

KILOMETERS FROM ANTENNA

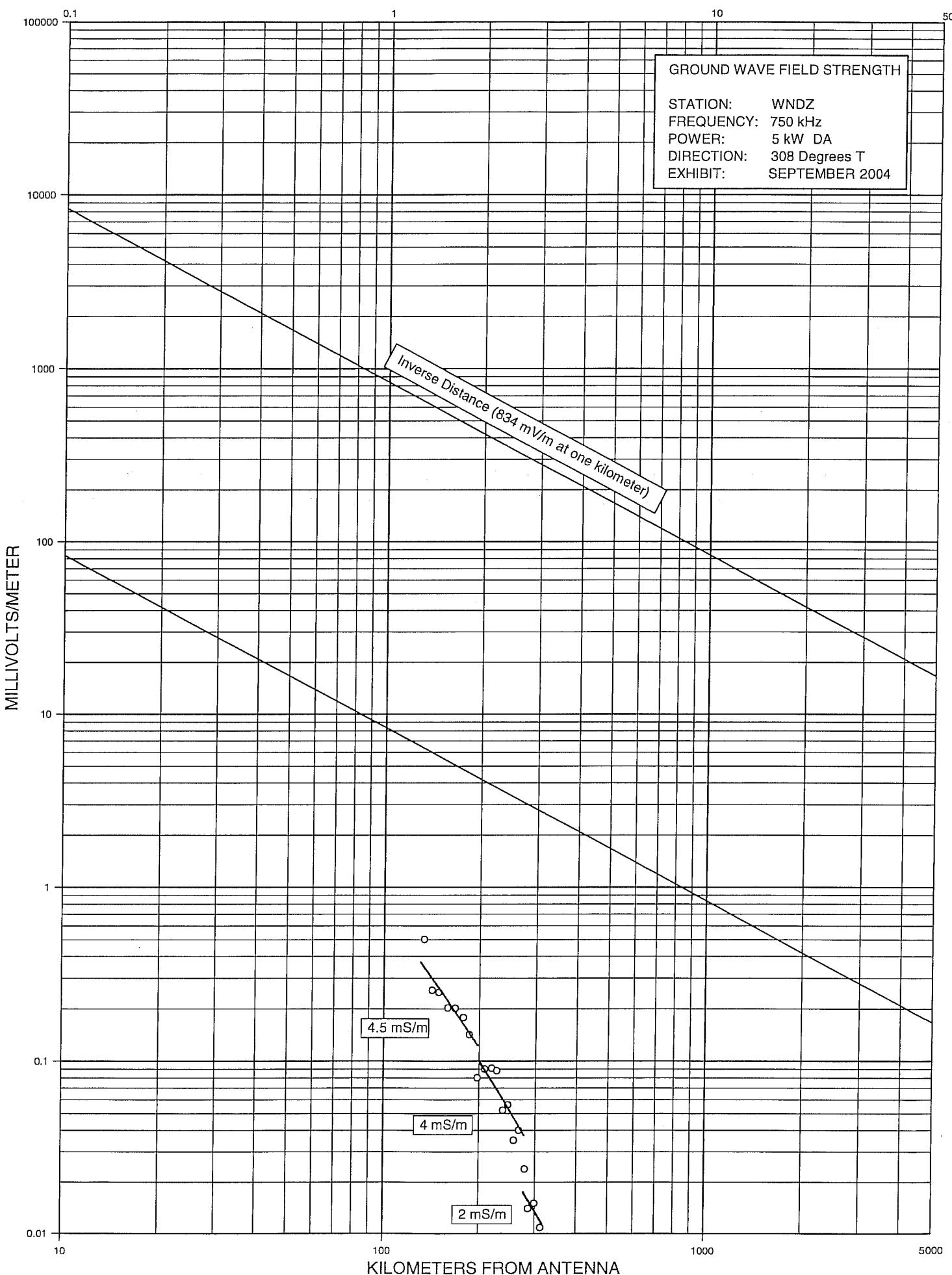


Figure 11
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Radio Station: WNDZ

318 Degree Radial - Day

Point Desig.	Distance (km)	Date	Time (local)	Field Strength (mV/m)
1	1.72	9/3/2004	957	285
2	1.86	9/3/2004	959	289
3	1.95	9/3/2004	1000	311
4	2.04	9/3/2004	1001	290
5	2.09	9/3/2004	1002	255
6	2.88	9/3/2004	1006	190
7	3.32	9/3/2004	1012	154
8	3.97	9/3/2004	1017	142
9	5.03	9/3/2004	1024	100
10	7.19	9/3/2004	1032	67.0
11	8.83	9/3/2004	1037	32.5
12	82.70	8/29/2004	1245	1.38
13	85.20	8/29/2004	1252	1.46
14	90.90	8/29/2004	1304	1.36
15	96.70	8/29/2004	1314	0.980
16	101.3	8/29/2004	1320	0.930
17	108.0	8/29/2004	1337	0.700
18	116.4	8/29/2004	1349	0.740
19	124.0	8/29/2004	1407	0.530
20	132.5	8/29/2004	1425	0.435
21	142.4	8/29/2004	1447	0.360
22	148.1	8/29/2004	1457	0.400
23	158.6	8/29/2004	1512	0.245
24	166.6	8/29/2004	1518	0.223
25	176.7	8/29/2004	1533	0.186
26	186.6	8/29/2004	1545	0.119
27	195.3	8/29/2004	1559	0.110
28	206.0	8/29/2004	1615	0.094
29	216.1	8/29/2004	1728	0.106
30	225.5	8/29/2004	1712	0.089
31	236.1	8/30/2004	923	0.084
32	250.8	8/30/2004	955	0.078
33	265.1	8/30/2004	1031	0.060
34	273.9	8/30/2004	1207	0.052
35	278.9	8/30/2004	1153	0.044
36	285.8	8/31/2004	1437	0.022
37	318.6	8/31/2004	1336	0.019
38	328.3	8/31/2004	1237	0.014
39	334.9	8/31/2004	1249	0.012

KILOMETERS FROM ANTENNA

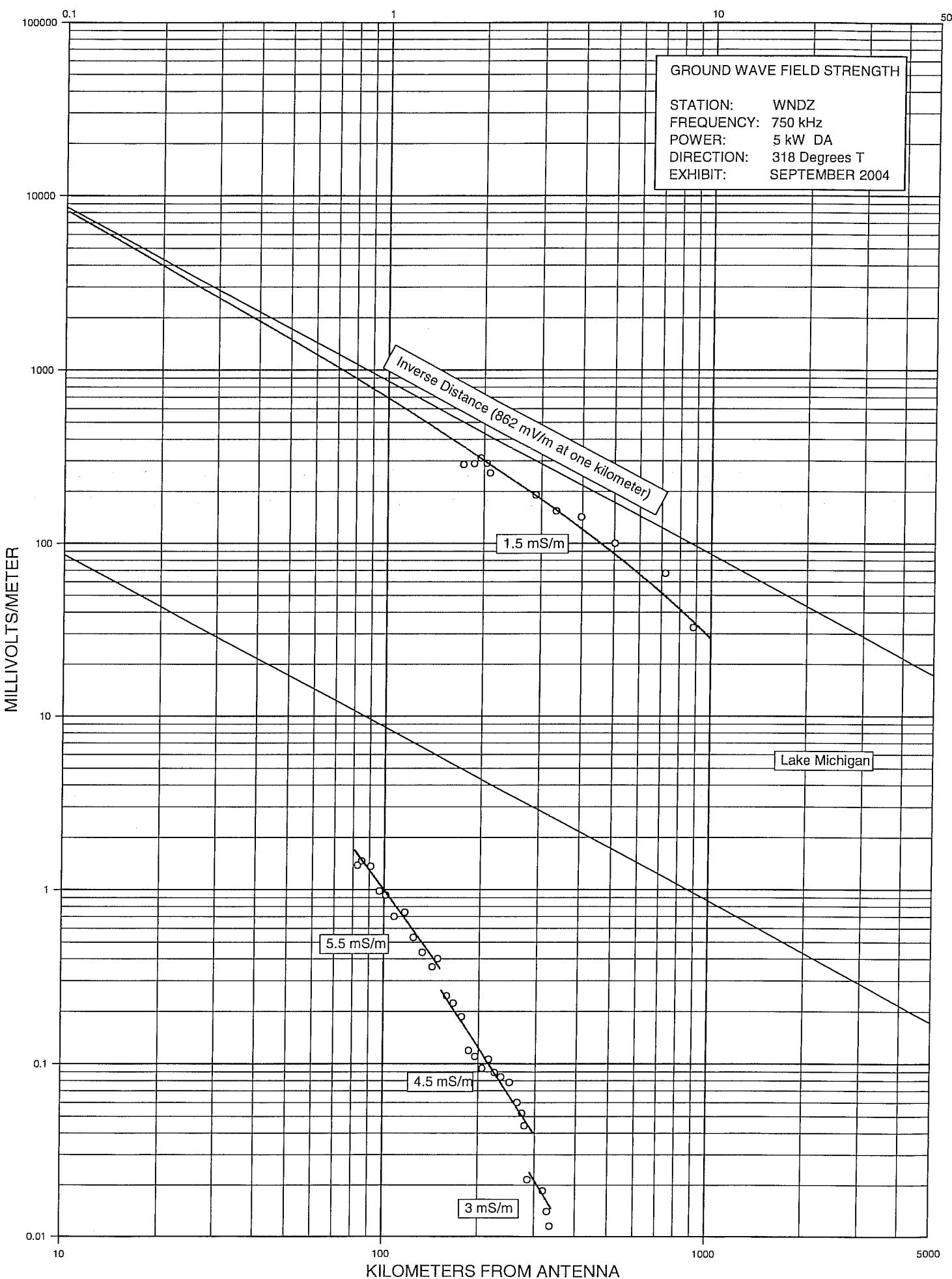


Figure 11
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Radio Station: WNDZ

328 Degree Radial (Stub) - Day

Point Desig.	Distance (km)	Date	Time (local)	Field Strength (mV/m)
1	179.0	8/30/2004	1526	0.400
2	187.8	8/30/2004	1510	0.236
3	197.2	8/30/2004	1458	0.144
4	206.0	8/30/2004	1440	0.125
5	219.1	8/30/2004	1423	0.139
6	226.9	8/30/2004	1625	0.118
7	238.0	8/30/2004	1645	0.149
8	246.6	8/30/2004	1705	0.109
9	255.2	8/30/2004	1719	0.086
10	264.5	8/31/2004	818	0.088
11	276.1	8/31/2004	836	0.080
12	286.6	8/31/2004	850	0.074
13	296.2	8/31/2004	900	0.051
14	307.6	8/31/2004	925	0.042
15	316.7	8/31/2004	939	0.032
16	323.7	8/31/2004	949	0.027
17	328.4	8/31/2004	956	0.015
18	337.2	8/31/2004	1010	0.012
19	346.7	8/31/2004	1025	0.015
20	356.6	8/31/2004	1039	0.018
21	367.0	8/31/2004	1100	0.020

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KILOMETERS FROM ANTENNA

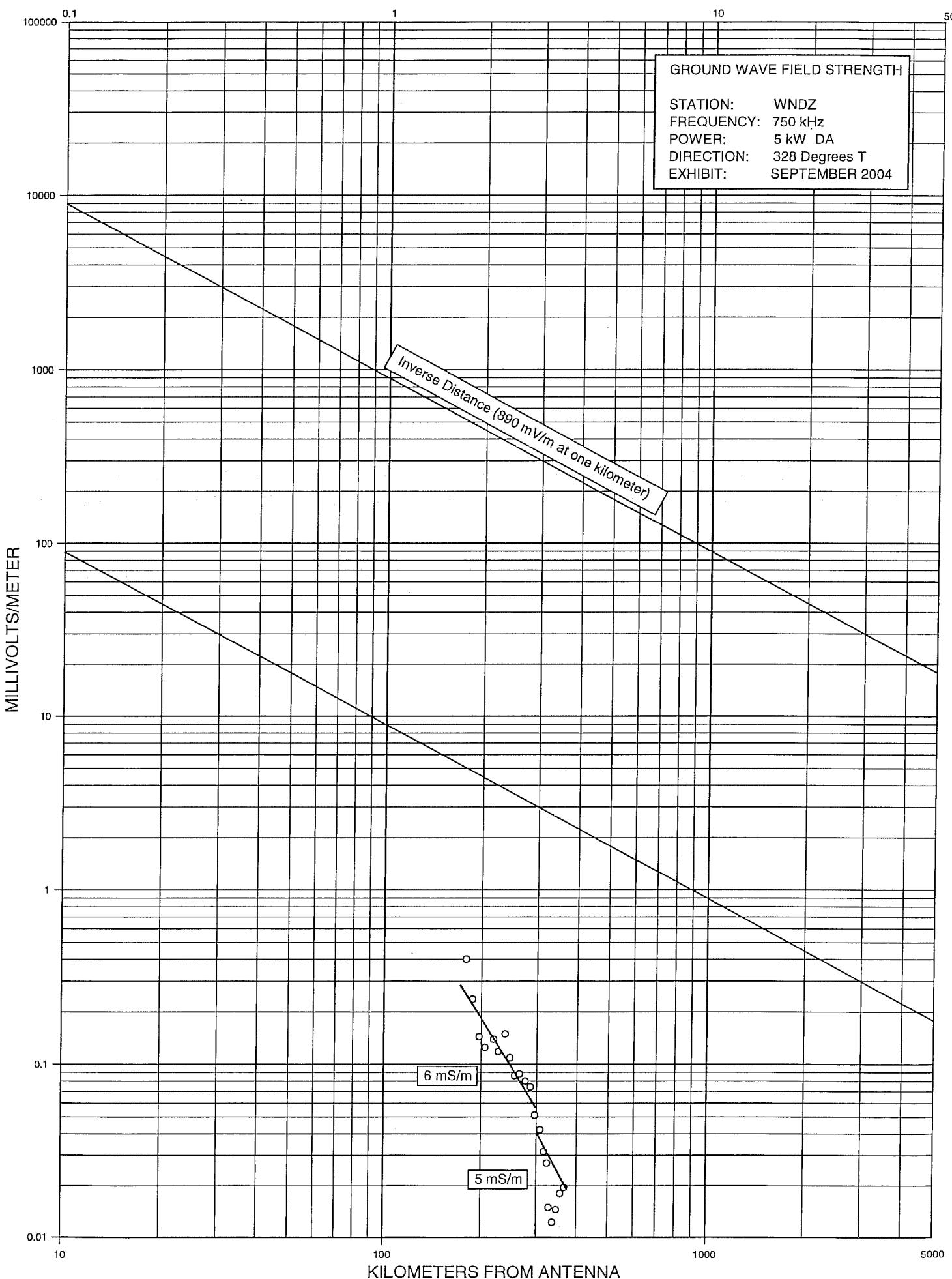


Figure 11
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Radio Station: WRPQ

103 Degree Radial - Day

Point Design.	Distance (km)	Date	Time (local)	Field Strength (mV/m)
1	0.45	8/31/2004	1544	260
2	0.57	8/31/2004	1542	226
3	0.76	8/31/2004	1540	170
4	0.98	8/31/2004	1538	125
5	1.63	8/31/2004	1531	90.0
6	1.72	8/31/2004	1530	80.0
7	1.81	8/31/2004	1533	78.0
8	1.94	8/31/2004	1528	80.0
9	2.04	8/31/2004	1527	84.0
10	2.31	8/31/2004	1525	74.0
11	3.62	8/31/2004	1522	29.5
12	4.37	8/31/2004	1518	21.4
13	5.12	8/31/2004	1516	20.7
14	7.42	8/31/2004	1512	10.2
15	10.20	8/31/2004	1506	7.10
16	11.60	8/31/2004	1503	5.70
17	13.80	8/31/2004	1454	3.35
18	15.90	8/31/2004	1447	2.29
19	18.90	8/30/2004	1141	1.60
20	21.60	8/30/2004	1147	1.55
21	24.10	8/30/2004	1153	1.41
22	27.10	8/30/2004	1158	0.810
23	30.30	8/30/2004	1217	0.850
24	35.40	8/30/2004	1227	0.570
25	40.80	8/30/2004	1233	0.590
26	47.10	8/30/2004	1243	0.435
27	50.50	8/30/2004	1248	0.385
28	55.60	8/30/2004	1254	0.350
29	60.30	8/30/2004	1303	0.380
30	65.20	8/30/2004	1321	0.282
31	69.90	8/30/2004	1328	0.250
32	75.20	8/30/2004	1338	0.212
33	80.70	8/30/2004	1348	0.205
34	84.80	8/30/2004	1356	0.176
35	89.40	8/30/2004	1406	0.174

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KILOMETERS FROM ANTENNA

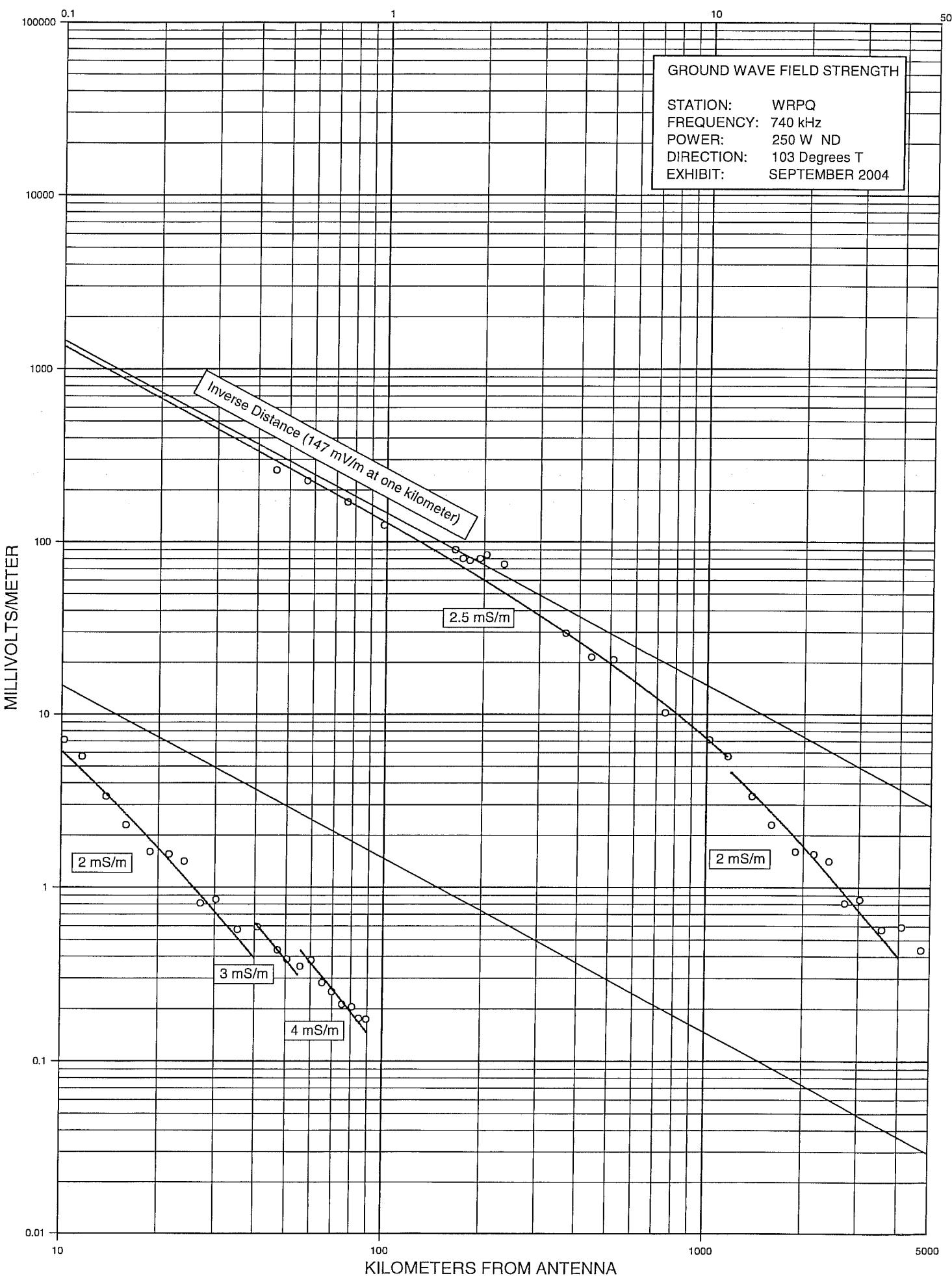


Figure 11
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Radio Station: WRPQ

123 Degree Radial - Day

Point Design.	Distance (km)	Date	Time (local)	Field Strength (mV/m)
1	0.55	8/31/2004	1546	230
2	0.63	8/31/2004	1547	182
3	0.73	8/31/2004	1549	185
4	0.82	8/31/2004	1550	175
5	0.97	8/31/2004	1556	147
6	1.01	8/31/2004	1557	138
7	1.24	8/31/2004	1559	98.0
8	1.43	8/31/2004	1600	109
9	1.85	8/31/2004	1606	72.0
10	2.04	8/31/2004	1607	61.0
11	2.15	8/31/2004	1608	63.0
12	2.39	8/31/2004	1610	60.0
13	5.01	8/31/2004	1655	26.5
14	7.22	8/31/2004	1659	13.5
15	7.89	8/31/2004	1702	10.9
16	9.96	8/31/2004	1717	4.70
17	11.90	8/31/2004	1721	2.78
18	12.30	8/31/2004	1723	3.45
19	13.80	8/31/2004	1727	3.02
20	16.80	8/30/2004	1117	3.10
21	17.80	8/30/2004	1121	2.48
22	22.90	8/30/2004	1106	1.66
23	25.90	8/30/2004	1100	1.19
24	28.10	8/30/2004	1056	1.06
25	32.30	8/30/2004	1046	1.13
26	35.90	8/30/2004	1040	0.920
27	41.50	8/30/2004	1020	0.740
28	44.30	8/30/2004	1015	0.530
29	51.10	8/30/2004	951	0.450
30	55.80	8/30/2004	941	0.460
31	61.20	8/30/2004	932	0.315
32	65.90	8/30/2004	917	0.345
33	72.10	8/30/2004	905	0.200
34	74.80	8/29/2004	1704	0.248
35	80.60	8/29/2004	1652	0.216
36	85.10	8/29/2004	1644	0.162
37	90.90	8/29/2004	1634	0.180
38	94.90	8/29/2004	1747	0.155

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KILOMETERS FROM ANTENNA

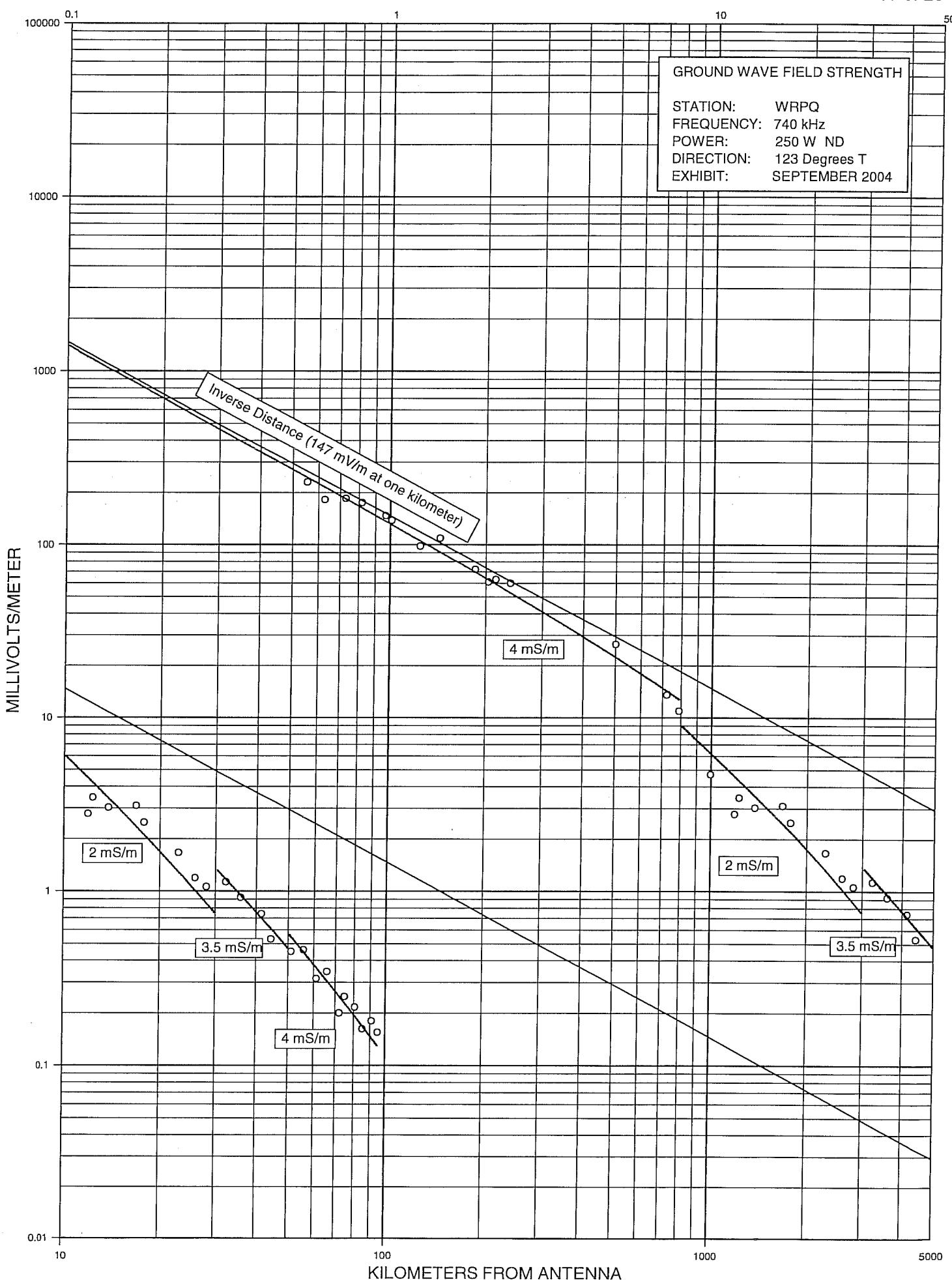


Figure 11
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Radio Station: WRPQ

143 Degree Radial - Day

Point Desig.	Distance (km)	Date	Time (local)	Field Strength (mV/m)
1	0.86	8/31/2004	1552	141
2	1.34	8/31/2004	1602	102
3	1.38	8/31/2004	1603	98.0
4	1.41	8/31/2004	1604	96.0
5	2.38	8/31/2004	1621	58.0
6	2.45	8/31/2004	1623	46.0
7	2.89	8/31/2004	1626	39.0
8	2.97	8/31/2004	1648	44.0
9	3.02	8/31/2004	1646	42.0
10	3.70	8/31/2004	1642	31.5
11	6.08	8/31/2004	1710	9.00
12	8.95	8/31/2004	1741	3.48
13	10.20	8/31/2004	1737	2.85
14	11.40	8/31/2004	1734	2.96
15	14.60	9/1/2004	1402	2.72
16	16.50	9/1/2004	1406	2.18
17	18.60	9/1/2004	1411	2.15
18	21.40	9/1/2004	1418	1.09
19	24.00	9/1/2004	1423	1.17
20	28.60	9/1/2004	1432	0.98
21	30.60	9/1/2004	1437	0.86
22	35.10	9/1/2004	1446	0.62
23	39.30	9/1/2004	1513	0.55
24	44.00	9/1/2004	1527	0.48
25	51.10	9/1/2004	1549	0.236
26	54.60	9/1/2004	1608	0.370
27	60.90	9/1/2004	1624	0.315
28	65.70	9/1/2004	1633	0.246
29	71.70	9/1/2004	1644	0.165
30	75.50	9/1/2004	1653	0.150
31	80.30	9/1/2004	1703	0.146
32	85.50	9/1/2004	1717	0.131

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KILOMETERS FROM ANTENNA

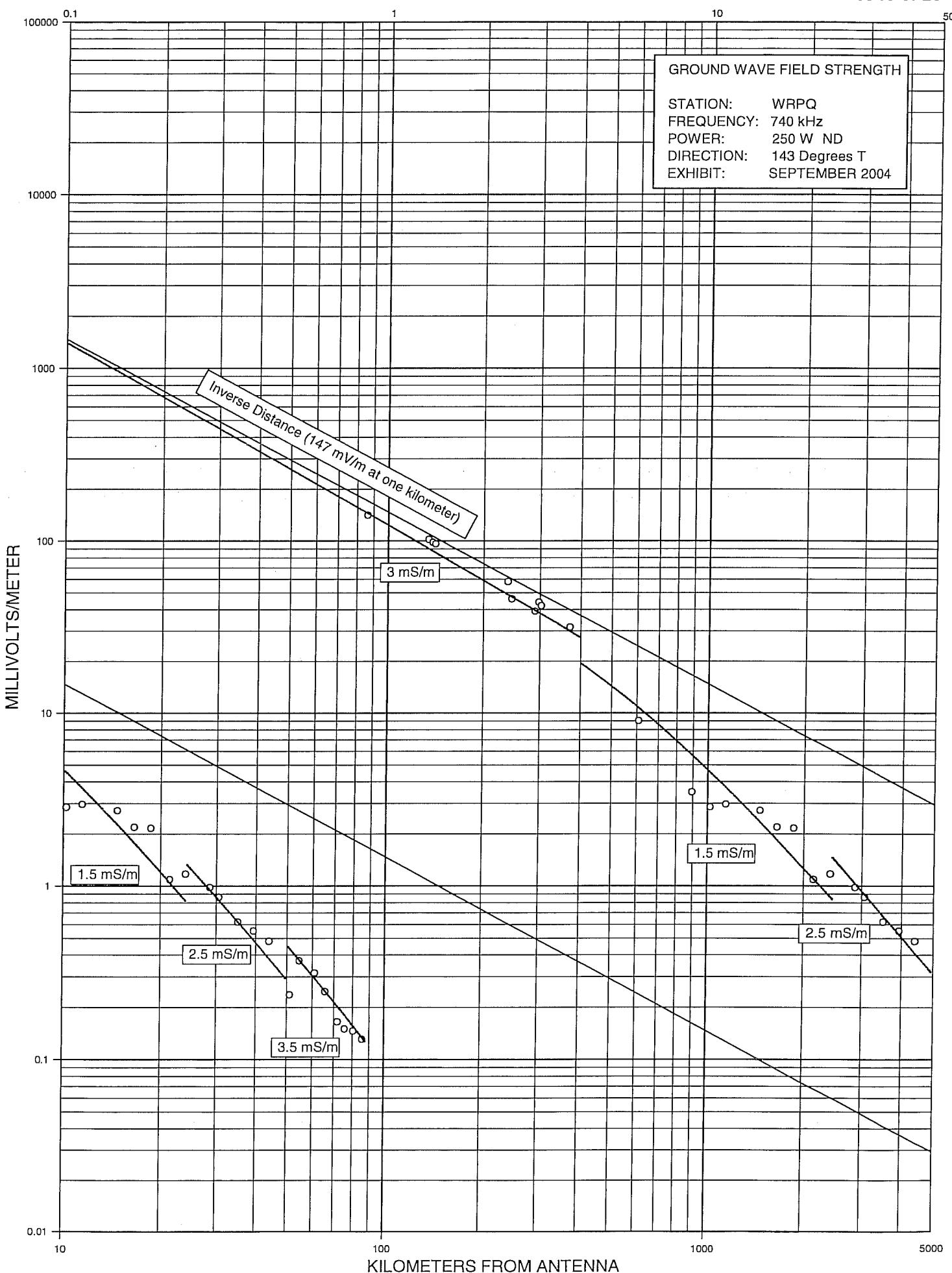


Figure 11
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KILOMETERS FROM ANTENNA

